

REMARKS

In response to the Office Action mailed May 2, 2006, please consider the following remarks. Favorable reconsideration of the application is respectfully requested.

Claims 1-9, 11-54, 56 and 57 are pending in the application. Of these claims, claims 1-7, 11-52, 54, 56 and 57 are withdrawn from consideration. Claims 8 and 9 are allowed and claim 53 is rejected. New claim 60 has been added by this amendment.

I. Rejection Over Hansen, George et al. and Miller et al.

Claim 53 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen (U.S. 4,405,680) in view of George et al. (U.S. 5,516,573) and further in view of Miller et al. (WO 00/40794). Amended claim 53 reads in part as follows:

"53. An asphalt-based roofing material comprising:

a nonwoven mat of glass fibers saturated and coated with an asphalt-based coating, the coating including asphalt and from about 30% to about 75% filler by weight of the coating, the coating including a top portion covering the top of the mat having first properties, a mat portion saturating the mat having second properties, and a bottom portion covering the bottom of the mat having third properties, wherein one of the second properties and the third properties is dissimilar to the first properties, the roofing material further comprising a layer of surface granules embedded in the top portion of the coating;

wherein the coatings comprise one of the group consisting of:

(F) the top portion of the asphalt-based coating having an increased adhesion defined by a granule loss of less than 0.8 grams when the roofing material is soaked in water for seven days and then tested by ASTM Method D4977; and wherein the bottom portion of the asphalt-based coating does not have the increased adhesion;"

Hansen discloses a roofing shingle including a glass fiber mat saturated with a mixture of unblown asphalt and polymer, and a top coating that is a mixture of blown asphalt and filler. A layer of surface granules may be embedded in the top coating. Hansen fails to teach or suggest an asphalt-based top portion of the coating having

increased adhesion, in combination with a bottom portion of the coating not having increased adhesion, as recited in claim 53.

George et al. discloses a roofing shingle including an asphalt-based substrate such as an asphalt-saturated glass fiber mat, and a non-asphalt adhesive on the surface of the asphalt-based substrate. Roofing granules are embedded in the top surface of the roofing shingle such that the adhesive provides an interface between the asphalt and the roofing granules. The adhesive is present in an amount sufficient to improve the adhesion of the roofing granules to the asphalt.

Miller et al. discloses a roofing shingle including a protective coating 70 adhered on top of the typical asphalt-based coating (i.e., on top of the upper region 76 of the asphalt coating). The purpose of the protective coating is to cause greater adhesion of the roofing granules to the shingle. The protective coating is typically a hot melt polymeric adhesive but it can also be an "asphalt-based adhesive". The composition of such an asphalt-based adhesive is not described. There is no suggestion to add a filler to the protective coating, particularly not from about 30% to about 75% filler.

II. Rejection Over Hansen, George et al. and Chaverot et al.

Claim 53 has also been rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen in view of George et al. and further in view of Chaverot et al. (U.S. 5,120,777). Chaverot et al. discloses an asphalt/polymer composition having adhesive properties. Specifically, the composition includes asphalt (bitumen) and 0.5-15% polymer and 0.05-10% adhesion promoter by weight of the asphalt. There is no suggestion to add a filler to the protective coating, particularly not from about 30% to about 75% filler. The composition is said to be useful for the production of coatings and in particular road surface dressings, asphalt mixes and seal coatings. The patent discloses tests showing the adhesive bonding of granulates to the composition.

III. Arguments vs. Hansen, George et al. and Miller et al. or Chaverot et al.

In the Office Action, the Examiner stated that it would have been obvious to have used the asphalt-based adhesive disclosed in Miller et al. or Chaverot et al. as the entire upper layer of Hansen in order to increase the ability of the upper layer to retain granules because of the teachings of George et al.

Applicants respectfully submit that it would not have been obvious to use the Miller et al. or Chaverot et al. asphalt-based adhesive as the entire upper layer of the Hansen roofing shingle, even though improved granule adhesion is the object of the George et al. patent. There is no suggestion in Hansen of any need to improve granule adhesion. Hansen relates to a roofing shingle having improved low temperature flexibility; it is unrelated to the specifics of granules or their adhesion. Hansen states that the general design and general preparation of the roofing shingles are left to those skilled in the art. Application of the Miller et al. or Chaverot et al. asphalt-based adhesive as the top layer of the Hansen roofing shingle would be a very large modification of the shingle in a manner totally unrelated to the objects of the Hansen invention. Further, such a modification would significantly increase the cost of the shingle because a polymer modified asphalt adhesive is more expensive than a coating asphalt. There would be no motivation to significantly increase the cost of the shingle, and make major changes to the composition of the shingle, in the absence of any suggestion in Hansen of any need to increase the granule adhesion. This is true even though George et al. is directed to improved granule adhesion.

Moreover, even if the teachings of the patents were combined as suggested by the Examiner, the resulting roofing material would still be different from the claimed roofing material. Claim 53 states that the asphalt-based coating includes 30% to 75% filler; this includes the top portion of the coating described in subpart (F). In contrast, the asphalt-based adhesives disclosed in Miller et al. and Chaverot et al. do not contain this filler. The adhesives are fundamentally different from a filled coating. Miller et al. states that the preferred material is a hot-melt adhesive, although an asphalt-based adhesive could also be used. These materials are non-filled, and they are more fluid than would be suitable to make up the entire top portion of the asphalt-based coating. The top portion of the asphalt-based coating must have sufficient consistency and stiffness for use as a roofing material. Similarly, Chaverot et al. discloses a non-filled material said to be useful as a road surface dressing, asphalt mix or seal coating. Again, these applications are more fluid than would be suitable to make up the entire top portion of the asphalt-based coating of a roofing material. There is no suggestion in Chaverot et al. to use the composition as part of a roofing

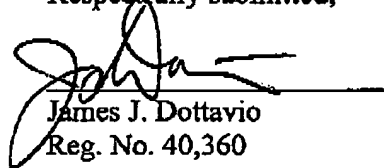
material. Therefore, Applicants respectfully submit that claim 53 is nonobvious over Hansen in view of George et al., Miller et al. and Chaverot et al.

IV. Comment on Hansen in view of Miller et al.

New claim 60 states that the "entire top portion" of the asphalt-based coating has an increased adhesion. Applicants' understanding is that the Examiner has agreed earlier in the prosecution that this language distinguishes Hansen in view of Miller et al., because Miller et al. discloses a layer of protective coating only on the surface of the top portion of the asphalt-based coating. Thus, only the protective coating layer has the increased adhesion, not the entire top portion of the asphalt-based coating. Specifically, this issue was addressed by the Examiner in the Office Action mailed November 16, 2004, in which the rejection of claim 10 (containing this language) was withdrawn. Thus, it is believed that new claim 60 is further distinguishable over the Miller et al. patent.

If any questions should arise with respect to the above remarks, or if it would in any way expedite the prosecution of this application, it is requested that the Examiner contact Applicants' attorney at the number listed below. If any fees are due in connection with the filing of this amendment, including any fee for a required extension of time under 37 CFR 1.136(a) for which Applicants hereby petition, please charge all necessary fees to deposit account no. 50-0568.

Respectfully submitted,



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